

Madisons

THE MAGAZINE OF JAMES MADISON UNIVERSITY

WINTER 2006

How will we communicate?

With the upsurge in non-English-speaking children in America's classrooms, future (and current) teachers are turning to ESL training. PAGE 36



BRIGHTLIGHTS



[Michael Peretich] Chemistry whiz

By Erin Pettit ('05)

f A equals success, then the formula is A=X+Y+Z. X is work. Y is play. And Z is keep your mouth shut," said Michael Peretich ('06). "It's a quote of Albert Einstein's." It's Peretich's favorite.

"It sorta just jumped out at me," he says. "I've found keeping your mouth shut is sometimes good."

But the double math and chemistry major has been doing plenty of talking this year — earning recognition among physicists and earning the opportunity to work with Nobel Laureates at the University of Tennessee.

Peretich was one of seven students chosen to present his research at the National Institute of Standards and Technology's Summer Undergraduate Research Fellowship program. He was chosen from among 120 participants and presented his paper, "A Comparison of Charged Particle Detectors Using Neutron Depth Profiling." In November, he also discussed his work at an American Nuclear Society Meeting in Washington, D.C.

Michael Peretich's research compares two types of charged particle detectors to determine their effectiveness for NDP use.

Peretich's research involves neutron depth profiling, a nondestructive analytical technique that uses neutron-induced charged particle reactions to probe the concentration versus depth distribution of light elements in real time. NDP can be used to analyze everyday objects like the glass used for LCD screens and semiconductor material to complex state-of-the-art objects like the lining of chamber walls for nuclear fusion reactors.

Peretich's research compares two types of charged particle detectors to determine their relative effectiveness for NDP use. His presentations both focused on the initial results.

Though Peretich has an extensive list of credentials — to which he is steadily making additions — it's still hard for him to see himself as at the top of his game. He won the chemistry department's 2005 R.D. Cool Award, yet remains modest.

"My adviser told me, 'You know, you're really good at this,' but it honestly hasn't hit me," says Peretich.

With one more year left of undergraduate work before him, Peretich is ecstatic to see the fruition of the new Physics and Chemistry Building. The Department of Chemistry and College of Science and Mathematics hosted a grand opening ceremony during Homecoming Weekend for the new research and teaching facility. Peretich completed most of his research in the drab modular buildings located away from the main campus, but never complained. "It was quite a hike to and from the rest of campus, but we loved it. The new building and equipment are a dream come true."

Being a science whiz seems like a Peretich family tradition. His sister, Melissa Peretich ('04), also graduated with a degree in chemistry; and his brother, Mark, studies aerospace engineering at Virginia Tech.

Peretich is engaged to Amanda Anderson ('05), another JMU chemistry graduate. She's currently pursuing her second JMU major and degree in biology. The couple has applied to the same six graduate schools and hopes that they both get accepted to at least one. "If not, we'll have to reassess," says Peretich. No doubt, they'll find the right chemistry.

Michele A. Kelly

Chem lab to Phizer Global

BY SANDE SNEAD ('82)

ichele A. Kelly ('90), Ph.D., is an associate director of Pfizer Global, one of this country's leading manufacturers of prescription medicines for humans and animals, and makers of many of the world's best-known

consumer brands. She supervises a team of 14 scientists and researchers.

And she got her start in JMU's chemistry department.

"I was a sophomore looking for an oncampus job when there was an opening for a teacher's assistant



Michele Kelly is responsible for quality control for Pfizer.